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Ticona

April 17, 2012
EIJ-028-12
TPI Project – 07082011-MISC

APR 24 2012

Air/Toxics & Inspection
Coordination Branch
6EN-A

Bishop Facility
Highway 77 South
P.O. Box 428
Bishop, TX 78343

Certified Mail
7011 1150 0001 5226 7159

Mr. David Eppler
Air Toxics and Inspection Coordination Branch
U.S.EPA Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Subject: **Clean Air Act ("CAA") Section 114 Information Request –
Supplemental Monthly Response**

Dear Mr. Eppler,

As agreed to in our meeting on December 20, 2011, Ticona Polymers, Inc. (TPI) is submitting the following update relating to the EPA's Section 114 Information Request. The team continues to work diligently on this project and will provide the next update to you by May 7, 2012.

MO3/MO4 Flares

Since the March 26th report, TPI has revaluated the alternative of utilizing NHVcz with a Hydrogen Btu value of 1212. Per your email of March 26, 2012 stating "You can use the higher adjusted Btu number for Hydrogen for the Btu/scf Net Heating Value calc. as long as you use that number for the NHVcz calculation as well." TPI has revised the calculations for both the MO-3 and MO-4 heating value as reflected in the spreadsheets attached for your review.

The attached spreadsheet shows the evaluation of the NHVcz for vent gas and natural gas streams routed to both flares. As demonstrated by this evaluation, the MO-3 flare will meet the required NHV of 300 Btu/scf without additional or supplemental natural gas. The analysis shows that using the hydrogen Btu value of 1212 results in the NHVcz value of 336.81. The current actual NHVcz value is 362.45 requiring no additional supplemental natural gas. TPI plans to apply the hydrogen heating value to the original data that was submitted in order to determine the existence of any Btu related issues. This evaluation will be transmitted during our next update on May 7th.

Utilizing the alternate hydrogen Btu value for the MO-4 flare showed favorable results for decreasing the previously determined amount of supplemental natural gas that is required to maintain a NHV of 300 Btu/scf. The NHVcz limit for the MO-4 flare

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is 341.11 btu/scf, and the current NHVcz value is 311.57 btu/scf, a difference of 29.54 btu/scf. In order to ensure the 300 Btu/scf value is present at all times, TPI will need to make some modifications to our current natural gas piping and valves. The addition of approximately 550,000 scfh of natural gas will be required to achieve the NHVcz of 342.84 btu/scf. TPI is working with an outside engineering firm to evaluate our current control valve, and the outside engineers have confirmed the TPI assessment of our current control valve as already being maxed out for both stroke and bore. The control valve is a limiting factor for adding an additional 550,000 scfh of natural gas. In order to rectify this issue, TPI is evaluating changing 50 feet of 6 inch pipe to 8 inch pipe and changing the current control valve to a design recommended by the outside engineers. We are currently working on a timeline for the installation of this new equipment. At this time, we are working to get a delivery date for the new valve so that we can determine whether the installation can be made on the next unit outage. TPI will continue to keep you up-to-date on the status and delivery of the necessary equipment.

GUR Unit

As discussed in our phone conversation on March 26, 2012, during a unit shut down on 1/30/12 between 23:00 and 23:40 at the GUR unit, the flare Btu value dropped below the required 300 Btu/scf. Operators were attempting to maintain the steam to vent gas ratio between 0.5 and 2.0 as agreed with the EPA. While purging various equipment for maintenance and attempting to maintain the steam to vent gas ratio, the flare Btu/scf value fell to 289 btu/scf. The operators added supplemental natural gas as quickly as possible to increase the Btu value above 300 btu/scf.

TPI contacted John Zink Co. to discuss this event. John Zink said the 0.5 to 2 ratio was very tight and possibly could not be met continuously. They recommended a range of 0.5 to 3 as being more appropriate as this range would not affect the destruction efficiency. John Zink did not believe that operating the flare without center steam would create any safety issues. Based on John Zink's advice, TPI agreed to turn off the center steam but then found that the center steam had already been turned off. After making this discovery, TPI calibrated the steam flow meter and is monitoring the meter to verify performance.

Should you have any questions or need additional information, please contact me at (361) 584-6104.

Sincerely,



Buddy Joyner
Sr. Environmental Specialist II

TCEQ ePay Voucher Receipt**Transaction Information**

Voucher Number:	153598
Trace Number:	582EA000120168
Date:	04/17/2012 02:10 PM
Payment Method:	CC - Authorization 0000003305
Amount:	\$450.00
Fee Type:	PERMIT BY RULE - NOT SMALL BUSINESS, CITY OR ISD
ePay Actor:	Buddy Joyner

Payment Contact Information

Name:	Buddy Joyner
Company:	Ticona Polymers Inc
Address:	5738 County Rd 4, Bishop, TX 78343
Phone:	361-584-6104

Site Information

Site Name:	TICONA POLYMERS INC
Site Address:	5738 COUNTY ROAD 4, BISHOP, TX 78343
Site Location:	MAILING PO BOX 428

Customer Information

Customer Name:	TICONA POLYMERS INC
Customer Address:	SAME, SAME, TX 78343

Other Information

Program Area ID:	AIRPERM
Comments:	IBU 2012 Expansion Project

MO-3 Flare Cz Comparison

Compounds (VG)	LFL (% Vol)	Composition (Vol %)	BTU Values (BTU/SCF)
Water	Infinity	2.47E-02	0
Methanol	0.06	2.06E-03	764.45
Formaldehyde	0.07	8.10E-04	589.16
Dioxolane	0.021	2.96E-03	1888.28
Trioxane	0.036	1.49E-04	1636.78
MOMA	0.014	1.35E-03	2669.58
Methy Formate	0.045	1.44E-02	1023.29
Methylal	0.016	3.73E-03	2041.45
Dimethyl Ether	0.034	2.83E-03	1506.47
Benzene	0.013	1.26E-03	3595.07
Butanol	0.014	8.84E-06	2255.15
Acetaldehyde	0.041	1.14E-02	1251.97
Nitrogen	Infinity	6.88E-01	0
Argon	Not flammable	8.02E-03	0
Carbon Dioxide	Not flammable	0.035167376	0
Carbon Monoxide	0.125	6.90E-03	321
Hydrogen	0.04	1.96E-01	1212

Compounds (NG)	LFL (% Vol)	Composition (Vol %)	Celanese BTU Values (BTU)
Methane	0.05	9.57E-01	908
Ethane	0.03	2.91E-02	1616
Propane	0.021	4.98E-03	2313
Butane	0.018	0.002014577	3009.42
Pentane	0.01	0.000946319	3704.3
Nitrogen	Infinity	2.96E-03	0
Carbon Dioxide	Not Flammable	3.10E-03	0
Natural Gas LHV		NHV _{NG}	936.7049
LFL _{LG}	0.159565282		
NHV _{NG}	297.2911832		
NHV _{NG-Lft}	47.43735135		
NHV _{CZ-Limit}	336.8051946		
NHV _{CZ}	362.4498064		

MO-4 Flare Cz Comparison

Compounds (VG)	LFL (% Vol)	Composition (Vol %)	BTU Values (BTU/SCF)
Water	Infinity	6.65E-02	0
Methanol	0.06	6.88E-04	764.45
Formaldehyde	0.07	2.79E-03	589.16
Dioxolane	0.021	1.26E-07	1888.28
Trioxane	0.036	4.15E-08	1636.78
Methy Formate	0.045	4.36E-03	1023.29
Methylal	0.016	1.30E-03	2041.45
Benzene	0.013	3.04E-06	3595.07
Nitrogen	Infinity	6.72E-01	0
Argon	Not flammable	9.58E-03	0
Carbon Dioxide	Not flammable	6.04E-02	0
Carbon Monoxide	0.125	3.34E-03	320.9
Hydrogen	0.04	1.80E-01	1212

Compounds (NG)	LFL (% Vol)	Composition (Vol %)	Celanese BTU Values (BTU/SCF)
Methane	0.05	9.57E-01	908
Ethane	0.03	2.91E-02	1616
Propane	0.021	4.98E-03	2313
Butane	0.018	2.02E-03	3009
Pentane	0.014	9.48E-04	3704
Nitrogen	Infinity	2.96E-03	0
Carbon Dioxide	Not Flammable	3.10E-03	0

NHV_{VG} 936.71

Natural Gas LHV	
LFL _{VG}	0.21
NHV _{VG}	227.95
NHV _{VG-L}	48.04
NHV _{CZ-limit}	341.11
NHV _{CZ}	311.57
adjusted NHV _{CZ}	342.84 w/ 550000 SCFH of natural gas
difference in CZ-limit and actual CZ is 29.54	